IN THE SPECIFICATION

Please replace the paragraphs beginning at page 4, line 10, through page 9, line 24, with the following rewritten paragraphs:

Briefly, the present invention provides an opposite end surface truing tool for truing opposite end surfaces of a grinding wheel, an opposite end surface truing device which uses the opposite end surface truing tool in truing the opposite end surfaces of the grinding wheel, and an opposite end surface truing method which is implemented by using the opposite end surface truing tool for truing opposite end surfaces of the grinding wheel. The opposite end surface truing tool comprises a first end surface truing section composed of a cylindrical first base body which protrudes bodily from a circumferential portion at one end surface of a disc-like base coaxially with the rotational axis of the same and a first abrasive grain layer in which numerous diamond abrasive grains are adhered with bond material to an external surface of the first base body. The truing tool further comprises a second end surface truing section composed of a cylindrical second base body which protrudes bodily from a circumferential portion at the other end surface of the base coaxially with the rotational axis and a second abrasive grain layer in which numerous diamond abrasive grains are adhered with bond material to an internal surface of the second base body. The rotational axis of the opposite end surface truing tool is inclined relative to the rotational axis of the grinding wheel within almost the same plane at a predetermined inclination angle.

With this construction, the first and second end surface truing sections are formed by protruding the cylindrical first and second base bodies respectively from opposite end surfaces of the disc-like base of the opposite end surface truing tool in the axial direction thereof and by proving on the external surface of the first base body and the internal surface of the second base body the first and second abrasive grain layers in which the numerous

diamond abrasive grains are adhered with the bond material, and the rotational axis of the opposite end surface truing tool is inclined relative to the rotational axis of the grinding wheel within almost the same plane at the predetermined inclination angle. Thus, by moving the opposite end surface truing tool toward the rotational axis of the grinding wheel, it can be realized that the first and second abrasive grain layers can respectively true the grinding surfaces at the opposite ends of the grinding wheel under almost the same condition to the sharp grinding surfaces having moderate ruggedness, while retaining a sufficient rigidity against the truing resistance as they go ahead of the first and second base bodies to be backed up thereby.

Please replace the paragraph beginning at page 15, line 24, with the following rewritten paragraph:

Next, the operation of the embodiment will be described. When truing is performed on the grinding surface 23a of the grinding wheel 20 which is at one end opposite to the main body 27 of the truing tool support device 26, the opposite end surface truing tool 25 is first rotationally driven by the built-in motor 29 in the direction opposite to the rotational direction of the grinding wheel 20. The workpiece table 12 and the wheel head 19 are relatively moved by the respective servomotors 17, 24, and the opposite end surface truing tool 25 is positioned relative to the grinding wheel 20 so that the first end surface truing section 31 is retracted to take a position which is radially outside of the grinding surface 23a at one end of the grinding wheel 20 and so that of the end edge of the first end surface truing section 31 protruding from the base 30 toward left, a circumferential portion (the portion closest to the rotational axis O1 of the grinding wheel 5) which protrudes to the leftmost side due to the inclination of the opposite end surface truing tool 25 takes in the first direction a position

where it should have been infed a minute amount against the grinding surface 23a. Then, the wheel head 19 is advanced by the servomotor 24 in the second direction thereby to relatively move the opposite end surface truing tool 25 toward the rotational axis O1 of the grinding wheel 20 (refer to the state indicated by the sign 46A in Figure 6). As a result, of the end edge of the first end surface truing section 31, the circumferential edge portion protruding to the leftmost side is brought into contact with the grinding surface 23a at one end of the grinding wheel 20 to be moved along the grinding surface 23a, whereby the first abrasive grain layer 36 trues the grinding surface 23a as it goes ahead of the first base body 35.

Please replace the paragraph beginning at page 16, line 22, with the following rewritten paragraph:

When truing is performed on the grinding surface 23b at the other end of the grinding wheel 20, the opposite end surface truing tool 25 is rotationally driven by the built-in motor 29 in the same direction as the rotational direction of the grinding wheel 20. The workpiece table 12 and the wheel head 19 are relatively moved by the respective servomotors 17, 24, and the opposite end surface truing tool 25 is positioned relative to the grinding wheel 20 so that of the end edge of the second end surface truing section 32 protruding from the base 30 toward right, a circumferential edge portion (the portion farthest from the rotational axis O1 of the grinding wheel 5) which protrudes to the rightmost side due to the inclination of the opposite end surface truing tool 25 is retracted to take a position which is radially outside of the grinding surface 23b at the other end of the grinding wheel 20 and so that the circumferential edge portion protruding the rightmost side of the second end surface truing tool 32 is brought into a position in the first direction where it should have been infed a minute amount against the grinding surface 23b. Then, the wheel head 19 is advanced by the

servomotor 24 in the second direction thereby to relatively move the opposite end surface truing tool 25 toward the rotational axis O1 of the grinding wheel 20 (refer to the state indicated by the sign 46B in Figure 6). As a result, of the end edge of the second end surface truing section 32, the circumferential edge portion protruding to the rightmost side is brought into contact with the grinding surface 23b at the other end of the grinding wheel 20 to be moved along the grinding surface 23b, whereby the second abrasive grain layer 40 trues the grinding surface 23b as it goes ahead of the second base body 39.

Please replace the paragraph beginning at page 20, line 13, with the following rewritten paragraph:

Next, the second embodiment will be described with reference to Figures 8 and 9. An opposite end surface truing tool in this second embodiment is as a whole composed, like that shown in the first embodiment, of the disc-like base 30 rotatable about the rotational axis O2, the first end surface truing sections 44 and the second end surface truing section each taking a cylindrical shape and protruding from the circumferential portions at the opposite end surfaces of the base 30 coaxially almost in parallel to the rotational axis O2 and the circumferential truing section taking a disc-like shape and protruding radially coaxially from the external surface of the base 30 in the form of a conical shape which makes the half vertex angle of eighty two (82) degrees with the rotational axis O2. In the first end surface truing section 44 and the second end surface truing section, the diamond abrasive grains 37 in the first abrasive grain layer 47 and the second abrasive layer which are brazed respectively on the external and internal surfaces of the first and second base bodies 35, 39 do not form a single layer as is the case of the first embodiment and differ only in the respect that they form

plural layers in the direction of depth. Thus, the following description is addressed to the different respect only.

Please insert the following paragraphs beginning at page 23, between lines 11-12 as follows:

Finally, various features and many of the attendant advantages in the foregoing embodiments will be summarized as follows:

In each of the foregoing embodiments typically shown in Figures 3, 5, 6 and 8 for example, the first and second end surface truing sections 31 (44), 32 are formed by protruding the cylindrical first and second base bodies 35, 39 from opposite side surfaces of the disc-like base 30 of the opposite end surface truing tool 25 in the axial direction thereof and by providing on the external surface of the first base body 35 and the internal surface of the second base body 39 the first and second abrasive grain layers 36 (47), 40 in which the numerous diamond abrasive grains 37 are adhered with the bond material 38, and the rotational axis O2 of the opposite end surface truing tool 25 is inclined relative to the rotational axis O1 of the grinding wheel 20 within almost the same plane at the predetermined inclination angle. Thus, by moving the opposite end surface truing tool 25 toward the rotational axis O1 of the grinding wheel 20, it can be realized that the first and second abrasive grain layers 36 (47), 40 can respectively true the grinding surfaces 23a, 23b at the opposite ends of the grinding wheel 20 under almost the same condition to the sharp grinding surfaces having moderate ruggedness, while retaining a sufficient rigidity against the truing resistance as they go ahead of the first and second base bodies 35, 39 to be backed up thereby.

In each of the foregoing embodiments typically shown in Figures 3, 5, 6 and 8 for example, the opposite end surface truing tool 25 for truing the grinding surfaces 23a, 23b at the opposite ends of the grinding wheel 20 has the first and second end surface truing sections 31 (44), 32 formed by protruding the cylindrical first and second base bodies 35, 39 axially from the opposite end surfaces of the disc-like base 30 and by providing the first and second abrasive grain layers 36 (47), 40 in which numerous diamond abrasive grains 37 are adhered with the bond material 38 to the external surface of the first base body 35 and the internal surface of the second base body 39. Thus, by moving the opposite end surface truing tool 25 toward the rotational axis O1 of the grinding wheel 20 with the rotational axis O2 of the truing tool 25 being inclined relative to the rotational axis O1 of the grinding wheel 20 within almost the same plane at the predetermined inclination angle, it can be realized that the first and second abrasive grain layers 36 (47), 40 true the grinding surfaces 23a, 23b at the opposite ends of the grinding wheel 20 under almost the same condition to the sharp grinding surfaces having moderate ruggedness, while retaining a sufficient rigidity against the truing resistance as they go ahead of the first and second base bodies 35, 39 to be backed up thereby.

In the foregoing first embodiment typically shown in Figures 3, 5 and 6 for example, since each of the abrasive grain layers 36, 40 is a single layer of the diamond abrasive grains 37, each abrasive grain layer 36, 40 in which the diamond abrasive grains 37 are adhered with the bond material 38 to the base body 35 becomes the smallest in thickness, and hence, the contact portion between the end edge of each abrasive grain layer 36, 40 and each grinding surface 23a, 23b of the grinding wheel 20 becomes the smallest in contact area thereat, so that the diamond abrasive grains 37 can be sufficiently cut into each grinding surface 23a, 23b of the grinding wheel 20 to crush the abrasive grains surely. Thus, by the truing, the moderate ruggedness can be formed on each grinding surface 23a, 23b, and each grinding surface 23a,

23b of the grinding wheel 20 becomes very sharp immediately from after the truing, so that the grinding efficiency and the workpiece surface quality can be enhanced further.

In the foregoing second embodiment typically shown in Figure 8 for example, brazing material 38 which has a strong affinity for diamond is used as the bond material, and the plurality of pores 48 are formed in the brazing material 38. Thus, even when the truing of each grinding surface 23a, 23b causes some diamond abrasive grains 37 to fall off each end surface truing section 47, the pores 48 surrounding the remaining diamond abrasive grains 37 ensure that the remaining diamond abrasive grains 37 protrude from the surface of the brazing material 38, and hence, the remaining diamond abrasive grains 37 can be sufficiently cut into each grinding surface 23a, 23b thereby to crush the abrasive grains on each grinding surface 23a, 23b surely.

In each of the foregoing embodiments typically shown in Figures 6 and 7 for example, since the third abrasive grain layer 42 in which the numerous diamond abrasive grains are adhered with the bond material is provided at one end surface of the disc-like third base body 41 protruding from the external surface of the base 30, it can be realized in addition to the foregoing effects to true the circumferential grinding surface 23c of the grinding wheel 20 satisfactorily. Also in the truing of the circumferential grinding surface 23c of the grinding wheel 20, the abrasive grains on the grinding surface 23c can be crushed sufficiently to have moderate ruggedness, and the grinding surface 23c of the grinding wheel 20 becomes sharp immediately from after the truing. Therefore, the grinding resistance can be decreased not to generate any grinding burn on the workpiece surface, so that the grinding efficiency and the workpiece surface quality can be obtained as desired.

In each of the foregoing embodiments typically shown in Figures 3, 5, 6 and 8 for example, the opposite end surface truing tool 25 is provided at its opposite ends with the first and second end surface truing sections 31 (44), 32 by protruding the cylindrical first and

second base bodies 35, 39 from the opposite ends of the disc-like base 30 and by providing on the external surface of the first base body 35 and the internal surface of the second base body 39 the first and second abrasive grain layers 36 (47), 40 each having the numerous diamond abrasive grains 37 adhered with the bond material 38, the rotational axis O2 of the opposite end surface truing tool 25 is inclined relative to the rotational axis O1 of the grinding wheel 20 within almost the same plane at the predetermined inclination angle, and the opposite end surface truing tool 25 is moved toward the rotational axis O1 of the grinding wheel 20 while being rotated in the opposite direction to, and in the same direction as, the rotational direction of the grinding wheel 20. Thus, the first and second abrasive grain layers 36 (47), 40 at the end edges of the first and second end surface truing sections 31 (44), 32 are moved ahead of the first and second base bodies 35 to be backed up thereby, so that with the retention of a sufficient rigidity against the truing resistance, the grinding surfaces 23a, 23b at the opposite ends of the grinding wheel 20 can be trued under almost the same condition respectively to the sharp grinding surfaces each having the moderate ruggedness.